

AMENDMENTS TO THE CLAIMS

Claim 1. (Original) A process for preparing a water-thinnable phosphorous-containing polymer precursor which polymer precursor is a polyester, which process comprises the steps of

- (a) providing a polyester which comprises phosphinate ester (P-O-C) bonds and
- (b) hydrolysing at least part of said phosphinate ester (P-O-C) bonds.

Claim 2. (Original) A process as claimed in claim 1, in which at least part of said phosphinate ester (P-O-C) bonds are hydrolysed selectively without hydrolysing the polyester backbone of the polymer precursor.

Claim 3. (Currently Amended) A process as claimed in claim 1, ~~or 2,~~ in which at least part of said phosphinate ester (P-O-C) bonds are hydrolysed in the presence of an alcoholic solvent.

Claim 4. (Original) A process as claimed in claim 3, in which the alcoholic solvent is selected from straight, branched or cyclic, saturated or unsaturated C₁₋₆-alkanols and in particular from the group consisting of methanol, ethanol, n-propanol, isopropanol, n-butanol, isobutanol and tert.-butanol.

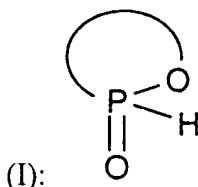
Claim 5. (Currently Amended) A process as claimed in ~~any of the preceding claims~~ claim 1, in which at least part of said phosphinate ester (P-O-C) bonds are hydrolysed in the presence of a base, preferably a strong inorganic base.

Claim 6. (Currently Amended) A process as claimed in ~~any of the preceding claims~~ claim 1, in which the polyester comprises at least two (meth)acrylate groups.

Claim 7. (Currently Amended) A process as claimed in ~~any of the preceding claims~~ claim 1, in which the polymer precursor is a radiation-curable polyester, the process comprising the steps of

- (a) mixing together:
- (i) a compound containing at least one hydrocarbylidenically unsaturated group and a plurality of carbonyloxy groups;
 - (ii) optionally a compound having a plurality of carbonyloxy groups and optionally free of hydrocarbylidenically unsaturated groups;
 - (iii) a polyol, and
 - (iv) an oxyphosphorous-containing compound (component (iv)) in which the phosphorous atom has at least one P-C bond and at least one P-O-C moiety which are resistant to hydrolysis or transesterification under the reaction conditions under steps (b) and (c); such component (iv) comprising a compound of formula (I) and/or effective isomers, salts and

mixtures thereof:



where, in formula (I): the phosphorous atom is substituted with at least one carbon atom to form at least one P-C bond; the P-O bond forms part of an organo ring, the ring being optionally substituted with one or more organo groups and/or optionally fused to one or more other organo rings;

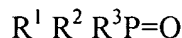
- (b) initiating polymerisation of the mixture to form a hydroxy and/or carboxy terminated

phosphorous containing polyester oligomer ("First Polymer"),

- (c) reacting the First Polymer with at least one acrylating agent to form a radiation-curable polymer precursor ("Second Polymer"),

- (d) hydrolysing at least part of the phosphinate ester (P-O-C) bonds in the Second Polymer.

Claim 8. (Original) A process as claimed in claim 7, in which component (IV) comprises a compound of formula II where



in formula (II): at least R^1 and R^2 independently represents C_{1-20} organo group substituted by one or more hydroxy and/or carboxy group; R^3 represents H or optionally substituted C_{1-20} organo group;

Claim 9. (Currently Amended) A process as claimed in ~~any of the preceding claims~~ claim 1, in which said phosphinate ester (P-O-C) bonds are in the side chain(s) of the polyester and the phosphorous atom of said phosphinate ester (P-O-C) bonds forms part of the backbone of said polyester or is directly or indirectly bonded to the backbone of said polyester via a bond which is not said phosphinate ester (P-O-C) bond.

Claim 10. (Currently Amended) A process as claimed in ~~any of the preceding claims~~ claim 1, in which the polyester comprises 9,10-dihydro-9-oxa-10-phosphaphenanthrene-10-oxide residues.

Claim 11. (Currently Amended) A water-thinnable phosphorous-containing polymer precursor obtainable from the process as claimed in ~~any of the preceding claims~~ claim 1.

Claim 12. (Original) A flame-retardant composition comprising a polymer precursor as claimed in claim 11.

Claim 13. (Original) A flame-retardant coating comprising a flame-retardant layer over a substrate (layer (1)) which layer is obtainable by curing a composition as claimed in claim 12.

Claim 14. (Original) A flame-retardant coating as claimed in claim 13, comprising at least one other layer (layer (2)) over the flame retardant coating, said other layer containing optionally sublayers (2a, 2b...)

Claim 15. (Original) A flame-retardant coating as claimed in claim 14, in which at least layer (2) is transparent.

Claim 16. (Currently Amended) A flame-retardant coating as claimed in claim 14, ~~or 15,~~ in which layer (2) imparts abrasion-resistance to the coating.

Claim 17. (Currently Amended) A flame-retardant coating as claimed ~~in one of claims 14 to 16~~ claim 14, in which the layer (2) contains at least one flame-retardant sublayer.

Claim 18. (Currently Amended) ~~Use of polymer precursor as claimed in claim 11~~ Method for preparing a flame-retardant composition which comprises employing the polymer precursor of claim 11.

Claim 19. (Currently Amended) ~~Use of a flame-retardant composition as claimed in claim 12~~ Method for coating a substrate which comprises applying to the substrate, the flame retardant composition of claim 12.

Claim 20. (Currently Amended) A substrate at least part of which is coated with a coating as claimed in ~~any of claims 13-17~~ claim 13.

Claim 21. (Original) A coated substrate according to claim 20, which substrate comprises wood, textile, fiber, metal or plastics.